CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	**Arntzen EQIP**
Proposed Implementation Date:	Summer 2020
Proponent:	Doug & Keith Arntzen
Location:	18N 19E 7 & 18
County:	Fergus
Trust:	Common

I. TYPE AND PURPOSE OF ACTION

The proponent has requested to install a water pipeline and a new cross fence on their state lease as a part of their EQIP plan. No water tanks will be placed on State land. The plan is to rotate a herd of around 50 – 60 cows through the summer and the new water and pastures will give them the opportunity to change season of use.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

Department of Natural Resources and Conservation (DNRC)
Northeastern Land Office (NELO)
Doug & Keith Arntzen (Lessee)

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

The DNRC and NELO have jurisdiction over this proposed project.

This project will require a Land Use License issued by NELO.

DNRC is not aware of any other agencies with jurisdiction or other permits needed to complete this project

3. ALTERNATIVES CONSIDERED:

Alternative A (No Action) – Under this alternative, the Department does not grant permission to install the new fence and pipeline.

Alternative B (the Proposed Action) – Under this alternative, the Department does grant permission to install the new fence and pipeline.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

Tables — Erosion Hazard (Off-Road, Off-Trail) — Summary By Map Unit

Summary by Map Unit — Fergus County, Montana (MT027)

Summary by Map Unit — Fergus County, Montana (MT027)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
12	Adger-Nobe clays, 0 to 2 percent slopes	Slight	Adger (60%)		30.1	8.9%
			Nobe (30%)			
			Daglum (10%)			
37	Cabba-Doney-Wayden complex, 4 to 8 percent slopes	Slight	Wayden (30%)		15.4	4.6%
			Cabba (30%)			
			Doney (30%)			
			Winifred (10%)			
69	Doney-Windham complex, 15 to 45 percent slopes	Moderate	Doney (50%)	Slope/erodibility (0.50)	3.1	0.9%
			Windham (30%)	Slope/erodibility (0.50)		
			Tally (5%)	Slope/erodibility (0.50)		
			Vebar (5%)	Slope/erodibility (0.50)		
80	Eltsac-Norbert clays, 8 to 25 percent slopes	Moderate	Eltsac (50%)	Slope/erodibility (0.50)	63.6	18.8%
			Norbert (45%)	Slope/erodibility (0.50)		
130	Judith-Tamaneen clay loams, 0 to 2 percent slopes	Slight	Judith (60%)		1.3	0.4%
			Tamaneen (30%)			
			Windham (10%)			
159	Marcott silty clay loam	Slight	Marcott (90%)		41.3	12.2%
			Marcott (5%)			
			Sudworth (5%)			
179	Norbert-Eltsac clays, 15 to 60 percent slopes	Severe	Norbert (65%)	Slope/erodibility (0.75)	174.9	51.6%
			Eltsac (25%)	Slope/erodibility (0.75)		
218	Tamaneen clay loam, 0 to 2 percent slopes	Slight	Tamaneen (90%)		3.1	0.9%
			Turner (10%)			
273	Winifred-Judith clay loams, 8 to 15 percent slopes	Slight	Winifred (50%)		5.8	1.7%
			Judith (25%)			
			Judith (9%)			
			Windham (8%)			
			Linwell (8%)			
Totals for Area of Interest					338.7	100.0%

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- The pipeline will cut through soils 179 which has a "severe" rating regarding off-road erosion hazard. These soils are found on the hills with a slope of 15 to 60%. Mitigation techniques such as water bars or straw waddles may need to be used until permeant vegetation is established and the erosion potential is reduced.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- The addition of an off-stream source of water may reduce the turbidity and erosion of Dog creek.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

Current plant community is dominated by Kentucky bluegrass, Needle and thread grass, Prairie junegrass and Sandbergs bluegrass.

The will be some ground disturbance and bare ground created associated with the stockwater and fence installation. These areas will be prone to noxious weed infestations. Frequent scouting should occur until revegetation has occurred to suppress noxious weed establishment. Knapweed is known to be in the area and efforts to keep them from establishing on the disturbed area will be implemented.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- Bare ground associated with the installation of a stockwater pipeline will revegetate with grass & shrubs in a few years. The Area of Potential Effect (APE) will remain visible for many years.

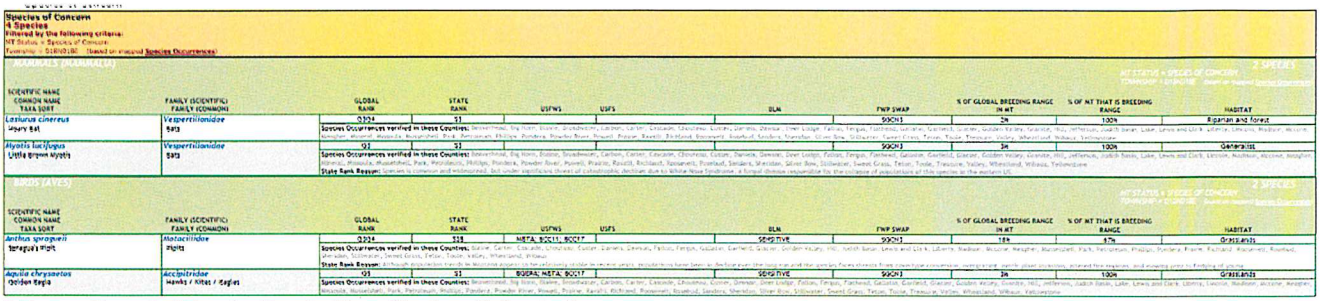
8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search was conducted on the Montana Natural Heritage site for potential "Species of Concern" in the general area.



Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search revealed that *Antiquities* have not been identified in the APE. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:
List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

Alternative A (No Action)-No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

EA Checklist Prepared By:	**Name:**	Brandon Sandau
	Title:	Land Use Specialist
Signature:		**Date**: July 23, 2019

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B (the Proposed Action) – Under this alternative, the Department does grant permission to install the cross fence and pipeline.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

No significant impacts expected.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	XXX	No Further Analysis

EA Checklist Approved By:	**Name:**	Jocee Hedrick
	Title:	Unit Manager, Northeastern Land Office
Signature:	Jocee Hedrick	**Date**: July 23, 2019

Plan Map

Date: 4/11/2019

omer(s): DOUGLAS ARNTZEN

Field Office: LEWISTOWN FIELD OFFICE
Agency: USDA-NRCS